

MADERA COUNTY

SENIOR CIVIL ENGINEER

DEFINITION

Under general direction to oversee, review, and participate in the work of staff involved in the design, construction, and inspection of roads, bridges and drainage systems; to perform the most complex professional engineering work; to provide lead direction to assigned staff; and to do related work as required.

SUPERVISION EXERCISED

Exercises technical and functional supervision over lower level staff.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey level in the Civil Engineer class series. Incumbents perform the full range of the most difficult assignments involved in carrying out civil engineering functions and programs. In addition, positions assigned to this class level provide lead work direction and training for less experienced staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

Leads, plans, assigns, and reviews the work of staff involved in the design, construction, and inspection of private roads, bridges, solid waste, drainage, and water and sewer systems; works independently on assigned projects; prepares, checks, reviews, and evaluates structural computations, seismic analyses, plans and specifications for County engineering programs; ensures plans and specifications are in compliance with requisite laws and regulations; stamps and signs plans and specifications; reviews and checks plans submitted by engineering consultants for compliance with applicable engineering standards, laws, and codes; checks and reviews subdivision maps, parcel maps, and survey records; supervises and performs land and construction surveys; inspects and investigates drainage and flooding problems; may represent the Department at Board of Supervisors, Planning Commission, and other public meetings; reviews conditions of approval placed on parcel maps, lot line adjustments, site plans, and use permits from an engineering perspective; prepares complex engineering reports; performs structural plan checks for building permits; directs and reviews the preparation of plans specifications and cost estimates for projects; instructs and advises project support staff and consultants regarding engineering techniques; interprets Federal, State and local regulations; prepares or assists in the preparation of grant applications; prepares comprehensive reports and makes recommendations on engineering and administrative problems; may represent the Department and act as liaison with other government agencies and the general public; prepares plans, designs, and specifications for County road and bridge construction work; performs a variety of professional engineering work related to County bridge and road construction; assists with supervisory duties including training, evaluating, and directing the work of subordinate staff.

OTHER JOB RELATED DUTIES

Performs related duties and responsibilities as assigned.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Knowledge of:

Principles, practices, and methods of civil engineering as applied to County public works projects, service areas, and special districts.

Mapping methods.

Engineering principles and practices as applied to the design, construction, and development of County facilities.

Pertinent Federal, State, and local laws, codes, and regulations related to drainage, water quality, water and sewer treatment, land surveying, and subdividing.

Principles and practices of land use planning and applicable codes.

Principles, practices and methods of civil engineering as applied to the planning, designing, and construction of complex roads, bridges, drainage and other structures.

Modern standards of alignment and grade of roads.

Design principles, the strength of materials and the stress analysis required in planning roads and bridges.

Hydraulics and structural design of roads, bridges, drainage or other projects.

Documents necessary for legal property descriptions and right of way acquisition and abandonments.

Federal, State and local regulations involving project approval for Federal and State funds including but not limited to environmental, design, and construction.

Computer programs and software used for public works projects.

Accepted safety practices relating to public works projects.

Principles of supervision, training, and performance evaluation.

Skill to:

Operate modern office equipment including computer equipment.

Operate a motor vehicle safely.

Ability to:

Plan, organize and direct the work of professional and subprofessional personnel and consultants.

Perform technical engineering research work, detailed analyses and make recommendations.

Design engineering plans and prepare specifications for flood control, drainage structures, roads, bridges, and other County facilities.

Provide guidance and training for engineering support staff.

Supervise, train, and evaluate assigned staff.

Perform detailed and exacting professional engineering work.

Prepare cost estimates for engineering projects.

Review engineering plans and specifications for drainage structures, roads, bridges and building structures.

Ability to:

Conduct technical engineering project planning work, make detailed analysis and prepare reports.
Inspect construction projects for adherence to contracts and specifications.
Prepare clear, concise technical engineering reports.
Effectively represent the County to the public, community organizations, and others.
Communicate clearly and concisely, both orally and in writing.
Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Experience and Training Guidelines:

Any combination equivalent to experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Experience:

One year of experience equivalent to an Associate Civil Engineer with Madera County.

-or-

Three years of increasingly responsible experience in professional engineering work.

Training:

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering.

License or Certificate:

Possession of valid registration as a Civil Engineer issued by the State Board of Registration for Professional Engineers.

Possession of, or ability to obtain, an appropriate, valid driver's license issued by the Department of Motor Vehicles in the State of California.

Special Requirements:

Essential duties require the following physical skills and work environment:

Ability to work in a standard office environment including the ability to work outdoors and travel to different sites and locations.